

## REMARKS

This filing is submitted in reply to the Office Action mailed April 9, 2008. Each basis for rejection contained therein will be addressed below. Claims will be argued as amended.

1. The Examiner has rejected claim 1 & 7 under 35 U.S.C 103(a) as being unpatentable over Matsuzaki et al. (US 2003/0189929) in view of Peloquin et al. (US 6,449,705).

The Examiner states that Matsuzaki discloses "The information necessary for system construction is input into the system in [0056]. According to Examiner, in order for this information to be input, it must be collected"

The Examiner has identified the concept of collection of data to be input into the system as being the same as in Matsuzaki. However the applicant has carefully reviewed the Examiners rejections and respectfully states, as will be explained below, that the features of alleged prior art identified by the Examiner are not the same as the features claimed by the Applicant. The Applicant has amended the claims to make the difference more clear.

The Applicant respectfully points out that in the present invention the data is collected periodically or when there is a physical change in the configuration from all devices in the SAN via software agents placed in every principal fabric switch and every host in the storage network. This phase may be likened to the monitoring phase of an autonomic loop.

Further, the Applicant respectfully asserts that the data is collected autonomically as a part of the monitoring phase of an autonomic loop. The data collection method of alleged prior art identified by the Examiner are not the same as the method claimed by the Applicant.

The Examiner states that Matsuzuki discloses "physical path setting for the virtual SAN system is performed by the tentative WWPNs in [0057]; and FC switches in which the FC ports of the storages are "zoned" depending on the accessibility to the FC ports of the servers in [0059]" and, the Examiner further states that Peloquin discloses "Col. 6lines 10-22 discloses a maximum and minimum size of a zone, and discloses the granularity of the zone is obvious".

The Examiner has identified the concept of zoning and size of the zone discussed in the claimed invention as being disclosed by Matsuzuki. However the applicant has carefully reviewed the Examiners rejections and respectfully asserts, as will be explained below, that the features of alleged prior art identified by the Examiner are not the same as the features claimed by the Applicant.

Applicants respectfully point out that collected data is analyzed in multiple steps and represented into a graph structure to get the port-to-port connectivity. Where each vertex may belong to multiple network paths. The policies are user generated and are input by a system administrator.

Applicant further asserts that the data analysis employed in the present invention is not the same as the alleged prior art identified by the Examiner. The applicant has carefully reviewed and identified the granularity is a physical attribute employed as a policy in the present invention and not the same as discussed as the alleged prior art identified by the Examiner.

According to Peloquin "an arbitrary number of partitions can be assigned to a logical volume and the partitions can be of an arbitrary size. Each logical volume is

divided into a plurality of zones, wherein the zones for a particular logical volume are substantially equal in size". However the applicant has carefully reviewed the assertions made by Peloquin asserts, as will be explained below, that the features of alleged prior art identified by the Examiner are not the same as the features claimed by the Applicant.

Applicant respectfully points out that zone plan generator applies the appropriate policy to the storage device and add the device to existing zones or to allocate a new zone for the device. Once the storage device is identified with a zone, then all storage devices that have a storage relationship with this storage device are grouped into the zone. The size of the zone is an attribute specified by the system administrator and it is not obvious for one skilled in the art when compared with the zoning concept discussed by Peloquin. Thus Peloquin teaches away from using granularity as a zoning policy or a practice.

Accordingly, the Applicant respectfully requests allowance of claims 1 and 7.

2. The Examiner rejected claims 3-5 under 35 U.S.C 103(a)as being unpatentable over Matsuzaki and Peloquin as applied to claim 1 above, and further in view of Tawil et al (US 2002/0103913).

Regarding claims 3-5 the Examiner states that Matsuzaki discloses "wherein devices include host systems( Server 100) to access data and storage subsystems (Storage 200) which are providers of data". (See Fig 1) The Examiner says that Matsuzaki and Peloquin teach all the limitations of claims 3-5 except for a zone dictating which devices are visible to each other, or being a network -layer access control mechanism that dictates which storage sub systems are visible to which hosts.

The Examiner further states that the general concept of zones controlling network visibility between devices well-known in the art taught by Tawil. (See [0010], "Devices in the same zone can see each other but devices in different zones cannot see each other")". The Examiner says it would have been obvious to one of ordinary skill in the art at the time of invention to modify Matsuzaki and Peloquin with the general concept

of zones controlling network visibility between devices as Taught by Tawil in order to conserve the port login resources of a storage device.( Tawil [0010],lines 1-2).

The Examiner has identified the concept or the method dictating the visibility of devices in a zone in the claimed invention is same as the art taught by Tawil. However the applicant has carefully reviewed the Examiners rejections and respectfully states, as will be explained below, that the features of alleged prior art identified by the Examiner are not the same as the features claimed by the Applicant. The Applicant has amended the claims to make the difference more clear.

Applicant respectfully asserts that Granularity, Device, Size and Type are the attributes used to generate zone policy as per the present invention. Further Applicant points out that device in SAN is checked to determine whether it is type of host system, then for the type of hosts which are all of type system and satisfy the criteria of policy a zone is created . Applicant has carefully reviewed the Examiner's assertions regarding zone relationship and infers no zone is created for those which don't have any relationship and a new zone is created which includes the host and intermediate ports.

In the Applicants invention FIG. 4 illustrates a method of generating zone plan, according to an exemplary embodiment of the invention. At one block the method of generating zone plan begins. Here relationships between devices in SAN are inferred. A policy, in which each storage device of type host is given its own zone, is applied then each device in SAN is checked to determine whether it is of type host system. For example Host1, Host2 and Host3 are all of type host system and satisfy the criteria of the policy. Accordingly, a zone is autonomically created which includes Host1, SS1 (due to the storage relationship) along with some ports (so as to capture all the ports in the storage relationship). No zone is created for Host2, because it does not have any storage relationship and we refrain from creating single-entry zones. With regards to Host3, a new zone is autonomically created which includes Host3, SS1 (due to the storage relationship) and along with the intermediate ports (due to the storage relationship).

Accordingly, the Applicant respectfully requests allowance of claims 3-5.

3. The claims 3-5 and 9-11 are rejected by the Examiner under 35 U.S.C 103(a) as being unpatentable over Hsieh and Peloquin as applied to claims 1 and above and further in view of Tawil . Examiner states that Hsieh discloses: “wherein the devices include host systems (Hosts 1-N) to access data and storage subsystems (Central Storage Device 8) which are providers of data. (See Fig 1). Hsieh and Peloquin teach all the limitations of claims 3-5 and 9-11 except for a zone dictating which devices are visible to each other, or being on a network-layer access control mechanism that dictates which are visible to which hosts. The general concept of zones controlling network visibility between devices is well-known in the art Taught by Tawil (See [0010], “Devices in the same zone can see each other but devices in different zones cannot see each other”). Further examiner sites that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hsieh and Peloquin with the general concept of zones controlling network visibility between devices as taught by Tawil in order to conserve the port login resources of a storage device.

The Examiner has identified the concept or the method dictating the visibility of devices in a zone in the claimed invention is same as the art taught by Tawil. However the applicant has carefully reviewed the Examiners rejections and respectfully states, as will be explained below, that the features of zones controlling network visibility between devices of alleged prior art identified by the Examiner are not the same as the features claimed by the Applicant.

Applicant respectfully asserts that above mentioned attributes are not used to generate zone policy as per the present invention. Further Applicant points out that the devices in SAN are checked to determine their relationships and of hosts which are all of type system and satisfy the criteria of policy a zone is created.

The claims have been amended to clarify certain difference with the cited alleged prior art. The claims amendments are supported by the specification. For example, Applicant in the FIG. 4 of his invention describes a method of generating zone plan, according to an exemplary embodiment of the invention. He explains the method of generating zone plan begins and how the relationships between devices in SAN are verified. The policy includes each storage device of type host is given its own zone , is applied then each device in SAN is checked to determine whether it is of type host system. For example Host1, Host2 and Host3 are all of type host system and satisfy the criteria of the policy. Accordingly, a zone is autonomically created which includes Host1, SS1 (due to the storage relationship) along with some ports (so as to capture all the ports in the storage relationship). No zone is created for Host2, because it does not have any storage relationship and we refrain from creating single-entry zones. With regards to Host3, a new zone is autonomically created which includes Host3, SS1 (due to the storage relationship) and along with the intermediate ports (due to the storage relationship). The claims as amended are not obvious in light of the cited prior art.

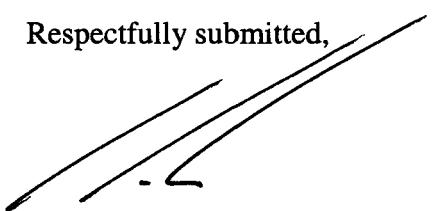
The Applicant submits that the pending claims 1, 3-5, 7 and 9-11 are patentable over the prior art. Applicant respectfully request allowance of claims 1, 3-5, 7 and 9-11.

## CONCLUSION

For the reasons set forth above, the Applicant asserts that claims 1, 3-5, 7, and 9-11 are allowable over the prior art. The Applicant respectfully requests allowance of these claims.

The Applicant invites the Examiner to contact Applicant's representative as listed below for a telephonic interview if so doing would expedite the prosecution of the application.

Respectfully submitted,



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